

myeloblasts and their differentiation from lymphogenous cells is not certain. It has been shown by Winckler, Brandenburg and others that lymphocytes and their ancestral cells are devoid of oxidizing ferments while the cells of myelogenous origin commonly contain it. However, even at the present time it is not clear whether the cells in all stages in the development of leukocytes are oxydase-containing. Nevertheless a positive reaction for oxydase within white cells of the blood is accepted as sufficient evidence for excluding them from the lymphogenous series. Various reagents have been used for this demonstration of this intracellular ferment. The guaiac test has been replaced by a more precise method whereby indophenol resulted from the interaction of oxydase upon alphanaphthol and dimethylparaphenylenediamine. This latter method has been in common use and has given, as demonstrated in the work of Evans, a new understanding to many cells in the circulation and in the hemopoietic organs under pathological conditions. One difficulty in making use of the diamine test has been in the transient nature of the reaction. The coloration of the oxydase granules is best observed within a few minutes after the application of the test solutions, from which time a rapid fading takes place. Furthermore, the diamine compound is very expensive and when made up in solution for use, lasts only a few days. GRAHAM (*Jour. Med. Res.*, xxxv, 231) has brought forward an excellent and inexpensive substitute for the demonstration of oxydase granules. He has tested his method upon blood smears as well as upon formalin-fixed tissues. The results have been very satisfactory. By this method the cells are treated with an old solution of alphanaphthol (or by a solution ripened with hydrogen peroxide) and after washing are then stained with an aniline-pyronin solution. The oxydase granules are sharply differentiated by the pyronin staining and are quite permanent. This new method should find a wide application and permit of a better classification of the indefinite white cells of the blood.

The Etiology of Scarlet Fever.—MALLORY and MEDLAR (*Jour. Med. Res.*, xxxv, 209) have found a microorganism in association with pathological changes of the respiratory tract in scarlet fever, which they believe is of etiological significance. The microorganism is a Gram-positive bacillus belonging to the indefinite diphtheroid group. The exact biological characteristics of the organism for comparison with other members of this group have, as yet, not been determined. The bacillus was isolated from the faucial tissues in 5 cases of scarlet fever. No conclusive results were obtained by means of the complement-fixation test nor by animal experiment by the use of this microorganism. The authors place much importance upon the presence of morphologically similar organisms present upon the epithelial surfaces of the pharynx and respiratory tract in cases dead of scarlet fever. They do not, however, make any positive claim for this organism as the cause of scarlet fever.

Primary Carcinoma of the Ureter.—SCHMITT (*Jour. Cancer Research*, i, 461) has collected all the undoubted cases of primary carcinoma of the ureter, beginning with the first reported by Wising and Blix in 1878. Spics, in 1915, published a very complete review including

benign and malignant tumors of both kidney and ureter. The author however, is able to add 3 other cases, besides the 1 he reports in detail, making a total of 20 cases now recorded in the literature. The condition is one seen after early adult life. The sexes appear to be equally affected. The diagnosis is rarely made clinically, since the symptoms come on very gradually. The presence of a painless abdominal tumor the author states, has most often led to a diagnosis of hydronephrosis due to ureteral obstruction. Pain, which may be severe, is a late manifestation, and in its absence a tentative diagnosis of neoplasm has sometimes been made. The author's case might be called a typical one, as it corresponds in general with the others, whose histories are briefly given. The patient was a female, aged fifty-eight years. The chief complaint was diffuse pain in the abdomen, especially low, in the left iliac region. There was a history of persistent constipation suggesting intestinal obstruction. A little over two months after admission and three and a half months after the onset of her illness, the patient died. Autopsy revealed many dense abdominal adhesions between the viscera and the abdominal wall. In the upper left abdomen there was a large retroperitoneal mass to which the jejunum was adherent in a sharply kinked position. The mass appeared to have some relation to the kidney. Other autopsy findings aside from metastases were of interest but rather unimportant. The neoplastic mass was firmly adherent to the abdominal wall, and to the vertebral column from the eleventh dorsal to the third lumbar vertebra. It was cystic, containing cloudy fluid and necrotic debris. The body of the third lumbar vertebra had almost been destroyed by the newgrowth, which also infiltrated the psoas muscle. The cavity of the tumor measured 10 x 10 x 15 cm., and its wall averaged 2 or 3 cm. in thickness. The wall consisted of a friable pink tissue on a firm white base. The upper boundary of the mass was higher than the upper end of the ureter. The occlusion of the ureter by the growth had led to a dilatation of the renal pelvis. The lower extremity was continuous with the ureter, which could be followed as a solid cord for a distance of 3 cm. into the mass. Below this point the ureter was normal. Sections showed the tumor to be a primary cancer of the ureter, further described as of the transitional cell variety. Metastases were found in the portal channels of the liver, beneath the capsule of the left kidney, and in the bodies of several vertebrae. The lung and liver, it may be noted, are the usual sites of secondary growth in tumors of this sort. The relation of calculi to carcinoma of the ureter is mentioned in this connection, but a definite suggestion as to the etiology is not made.

Experimental Typhoid Cholecystitis with Cholelithiasis.—The importance of a typhoid infection locating in the gall-bladder is by no means new. It has been brought to our attention through the finding of the typhoid bacillus in the gall-bladder in virtually every case of typhoid fever, and also in the evidence that human carriers of this infection possess an infected nidus in this viscus. Furthermore, there is evidence that not a few of the cases of chronic cholecystitis have their beginning in typhoid fever. The association of gall-stones with these chronic inflammatory processes of the gall-bladder is also well known and has been shown to have a direct relation with a typhoid infection.